Title (en)

DIMENSIONAL MEASURING CHAIN WITH A LINEAR OUTPUT

Publication

EP 0378017 B1 19920415 (FR)

Application

EP 89403422 A 19891211

Priority

FR 8816244 A 19881209

Abstract (en)

[origin: EP0378017A1] The capacitive dimensional measuring chain with linear output consists mainly of a capacitive sensor (1a) formed by a detection electrode and a guard electrode surrounding the detection electrode supplied respectively by two sources of bias voltage (Vp, V'p), a reference capacitor (6a) supplied by a reference voltage source (7a), and a circuit (9) which measures the distance (e) between the detection electrode and a conducting component (P) placed opposite this electrode. The sources of bias voltage are variable and are controlled in amplitude by a distance-measuring signal (Ve) delivered by the measuring circuit. The measuring circuit contains means (90 to 93) for amplifying and demodulating an input error signal which represents a difference between a charge on the capacitance of the sensor (Ccpt) formed between the detection electrode (10) and the component (P) separated by the distance (e) to be measured and a charge on the reference capacitor. The distance-measuring signal supplied by the measuring circuit represents linearly the distance to be measured (e) and, because of the control of the amplitude, stabilises the sources of bias voltage in temperature and time. <IMAGE>

IPC 1-7

G01B 7/02; G01B 7/14

IPC 8 full level

G01B 7/02 (2006.01); **G01B 7/14** (2006.01); **G01D 5/22** (2006.01); **G01D 5/24** (2006.01)

CPC (source: EP KR US)

G01B 7/023 (2013.01 - EP US); **G01B 7/14** (2013.01 - EP KR US)

Cited by

FR3072176A1; FR2763124A1; FR2693555A1; NL2004052C2; EP0653606A1; FR2712690A1; US5497101A; WO9852004A1; WO2019072665A1

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DOCDB simple family (publication)

EP 0378017 A1 19900718; **EP 0378017 B1 19920415**; DE 68901259 D1 19920521; ES 2032132 T3 19930101; FR 2640373 A1 19900615; FR 2640373 B1 19921211; JP H02201102 A 19900809; KR 900010354 A 19900707; US 5065105 A 19911112

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EP 89403422 A 19891211; DE 68901259 T 19891211; ES 89403422 T 19891211; FR 8816244 A 19881209; JP 32126189 A 19891211; KR 890018136 A 19891208; US 44503489 A 19891201